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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/087,318      | 03/01/2002  | Gary J. Hydock       | 17851.0 (Hydock)    | 2105             |

1342 7590 07/08/2003

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EXAMINER

BAXTER, GWENDOLYN WRENN

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

3632

DATE MAILED: 07/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/087,318

Applicant(s)

HYDOCK, GARY J.

Examiner

Gwendolyn Baxter

Art Unit

3632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-11, 13, 14, 16, 17, 19-23, 25-31 and 33 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 12, 18, 24, 32 and 34-37 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: \_\_\_\_\_

Art Unit: 3632

This is the second office action for serial number 10/087,318, Modular Radiant Heat Panel System, filed on March 1, 2002.

***Information Disclosure Statement***

The information disclosure statement filed March 1, 2002 has been placed in the application file, and the information referred to therein has been considered.

***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

*The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.*

Art Unit: 3632

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,635,710 to Shelley, hereinafter Shelley. The present invention reads on Shelley as follows: Shelley discloses radiant heat transfer panel comprising a formed tray (26). The tray defines a thermal volume (30) and a conduit channel (14). The volume contains the thermal mass. The channel, volume and thermal mass configured and arranged to permit heat transfer between the conduit and the thermal mass (col. 3, lines 41+). The conduit channel is a U-shaped trough. The conduit channel is cylindrical. The conduit channel comprises a linear section. The conduit channel comprises an arcuate section. See figure 2 to see the various orientations of the conduit channel.

Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,550,350 to Barnes, hereafter Barnes. The present invention reads on Barnes as follows: Barnes discloses a radiant transfer panel comprising a thermal mass (1). The thermal mass has a conduit channel (24). The conduit channel is configured and arranged to permit heat transfer between the conduit and the thermal mass.

Art Unit: 3632

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shelley in view of U.S. Patent No. 6,283,382 B1 to Fitzmeyer. Shelley teaches the limitations of the base claim, excluding the conduit channel is plastic tubing.

Fitzmeyer teaches a panel comprising plastic tubing that is a heat conductive flexible plastic. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the material of the conduit of Shelley to have incorporated the plastic tubing as taught by Fitzmeyer, as mere substitution of functional equivalent part, since this tubing allows heat to be transferred.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shelley in view of U.S. Patent No. 6,021,646 to Burley. Shelley teaches the limitations of the base claim, excluding the tray being formed from one of the following compositions: polyvinyl chloride, polyethylene, polybutylene and thermoplastic material.

Burley teaches a thermal radiant panel formed of polyethylene or polypropylene. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the material of the tray as taught by Shelley to have incorporated the prescribed

Art Unit: 3632

thermoplastic material as taught by Burley for facilitating transportation and installation of the panel.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shelley in view of U.S. Patent No. 2,726,593 to Lahti. Shelley teaches the limitations of the base claim, excluding the thermal mass comprising a composition from a group consisting of cement, mortar, ceramic, concrete or stone.

Lahti teaches a radiant panel comprising a thermal mass is a gravel filler having a concrete surface or textured outer surface (col. 4, line 28+). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the thermal mass as taught by Shelley to have incorporated filler as taught by Lahti, as mere substitution of functional equivalent parts for the purpose of controlling the heating in the heat radiating member.

Claims 14-17, 19-23, 25-31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,415,155 Cohen. Cohen discloses a radiant heat system comprising multiple radiant heat transfer panels (1). Each panel has a thermal mass (the panels are formed of plastic that is considered to be the thermal mass) and a conduit channel (15). The conduit communicates with an apparatus for heat the fluid (col. 4, lines 37+). The multiple panels are positioned adjacent to each other such that the conduit (19) extends through a series of the conduit channels. The panels, conduit and apparatus is configured and arranged to permit heat transfer from the fluid to the thermal mass of the panel whereby the heat radiates from the panels. The fluid is water (water maybe used with the panel col. 2, line 27). Additional, the system

Art Unit: 3632

comprises an attachment spacer or edge spacer (23). A over layer has a finished surface (tile). An underlayer (57) is utilized. The panel is attached to the underlayer by mechanical fastener (55). The multiple panels define an outer perimeter and the outer perimeter is immediately adjacent a standing wall. The panel has an outer surface and the outer surface defines a ceiling. However, Cohen fails to teach a separate conduit channel and a fluid conduit. It would have been obvious to one having ordinary skill in the art at the time the invention was made to made the conduit channel and the fluid conduit into separate components, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

Claims 29-31 and 33 are inherent, since the structural elements are forthright in the Cohen reference.

#### ***Allowable Subject Matter***

Claims 4, 5, 12, 18, 24, 32, and 34-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to teach the following: a fixture tower, side gusset, and the attachment spacer being wood. Additionally, the art fails to teach the step of providing an attachment space and positioning the attachment spacer adjacent at least one of the panels.

Art Unit: 3632

*Conclusion*

The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Shelley 4338995; Bergh 4,766,951; Pickard 5,454,428 and Gary 5,862,854 teaches a radiant heat transfer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gwendolyn Baxter whose telephone number is (703) 308-0702. The examiner can normally be reached Monday-Friday from 8:30 A.M. to 5:00 P.M. Eastern Time Zone.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1113. The fax phone number for this Group is (703) 305-3597.

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June 29, 2003



Art Unit: 3632

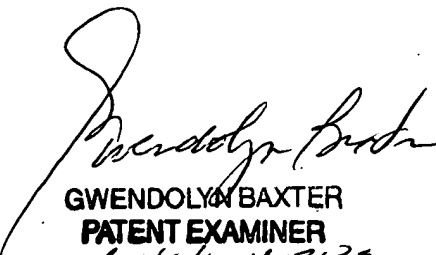
***Conclusion***

The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Shelley 4338995; Bergh 4,766,951; and Gary 5,862,854 teaches a radiant heat transfer.

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GB  
June 29, 2003

  
GWENDOLYN BAXTER  
PATENT EXAMINER  
*Art Unit 3632*